

WHAT IS CLAIMED IS:

1. A position sensor system provided at a slidable vehicle seat for sensing seat position in zones and facilitating controlling of the operation of a vehicle passenger restraint device according to a position of said vehicle seat relative to said vehicle passenger restraint device, said vehicle seat including a pair of substantially parallel slide rail means which comprise upper rail members and lower rail members mounted to a floor of a vehicle, said upper rail members being attached to lower portions of said vehicle seat and supported to said lower rail members so as to be movable along said lower rail members, so that said vehicle seat can be moved along said lower rail members; wherein said upper rail members and said lower rail members are combined with each other, to thereby define inner spaces and said position sensor system is mounted within at least one of said inner space.

2. A position sensor system as set forth in Claim 1, wherein said position sensor system comprises a sensor unit arranged within one of an upper rail member and lower rail member of one of the pair of the slide rail means and mounted to a predetermined portion of the one of said upper rail member and lower rail member, and a magnetic shielding plate arranged within the other of said upper rail member and lower rail member and mounted to a predetermined portion of the other of said upper rail member and lower rail member, said sensor unit including a magnetic actuator and an element which is responsive to a magnetic field created by said magnetic actuator, said magnetic actuator and said magnetic field-responding element being spaced apart and opposed to each other, and wherein a space between said magnetic actuator and said magnetic field-responding element receives said magnetic shielding plate therein as said vehicle seat is moved along said lower rail members, whereby the passage of a magnetic flux generated by said magnetic actuator is blocked by said magnetic shielding plate.

3. A position sensor system as set forth in Claim 1, wherein said position sensor system comprises a proximity sensor arranged within one of an upper rail member and lower rail member of one of the pair of the slide rail means and mounted to a predetermined portion of the one of said upper rail member and lower rail member, and metallic and nonmetallic portions being sensed by said proximity sensor, said metallic portion and said nonmetallic portion being provided at a first predetermined portion of the other of said upper rail member and lower rail member and a second predetermined portion of the other of said upper rail member and lower rail member, respectively.

4. A position sensor system as set forth in Claim 1, wherein said position sensor system comprises a magnet arranged within one of an upper rail member and lower rail member of one of the pair of the slide rail means and mounted to a predetermined portion of the one of said upper rail member and lower rail member, and a magnetic sensor arranged within the other of said upper rail member and lower rail member and mounted to a predetermined portion of the other of said upper rail member and lower rail member so as to be opposed to said magnet.

5. A position sensor system as set forth in Claim 4, wherein said magnet comprises a strip-like magnet, said strip-like magnet having chamfered upper edge portions extending along a longitudinal direction thereof and sloping downward.

6. A position sensor system as set forth in Claim 4, wherein said magnet is mounted to said predetermined portion of the one of said upper rail member and lower rail member through an iron plate serving as a yoke.

7. A position sensor system as set forth in Claim 5, wherein said magnet is mounted to said predetermined portion of the one of said upper rail member and lower rail member through an iron plate serving as a yoke.

8. A position sensor system as set forth in Claim 4, wherein the one of said

upper rail member and lower rail member has a flame portion provided at said predetermined portion thereof, and said magnet is received in and supported by said frame portion.

9. A position sensor system as set forth in Claim 5, wherein the one of said upper rail member and lower rail member has a flame portion provided at said predetermined portion thereof, and said magnet is received in and supported by said frame portion.

10. A position sensor system as set forth in Claim 6, wherein the one of said upper rail member and lower rail member has a flame portion provided at said predetermined portion thereof, and said magnet is received in and supported by said frame portion.

11. A position sensor system as set forth in Claim 7, wherein the one of said upper rail member and lower rail member has a flame portion provided at said predetermined portion thereof, and said magnet is received in and supported by said frame portion.

12. A position sensor system as set forth in Claim 8, wherein said frame portion is formed by causing said predetermined portion of the one of said upper rail member and lower rail member to be protruded inwardly.

13. A position sensor system as set forth in Claim 9, wherein said frame portion is formed by causing said predetermined portion of the one of said upper rail member and lower rail member to be protruded inwardly.

14. A position sensor system as set forth in Claim 10, wherein said frame portion is formed by causing said predetermined portion of the one of said upper rail member and lower rail member to be protruded inwardly.

15. A position sensor system as set forth in Claim 11, wherein said frame

portion is formed by causing said predetermined portion of the one of said upper rail member and lower rail member to be protruded inwardly.

16. A position sensor system as set forth in Claim 4, wherein the one of said upper rail member and lower rail member has a recess portion provided at said predetermined portion thereof, and said magnet is received in said recess portion.

17. A position sensor system as set forth in Claim 5, wherein the one of said upper rail member and lower rail member has a recess portion provided at said predetermined portion thereof, and said magnet is received in said recess portion.

18. A position sensor system as set forth in Claim 6, wherein the one of said upper rail member and lower rail member has a recess portion provided at said predetermined portion thereof, and said magnet is received in said recess portion.

19. A position sensor system as set forth in Claim 7, wherein the one of said upper rail member and lower rail member has a recess portion provided at said predetermined portion thereof, and said magnet is received in said recess portion.

20. A position sensor system as set forth in Claim 4, wherein the one of said upper rail member and lower rail member has a pair of spaced apart rising pieces formed by causing regions of said predetermined portion thereof to be cut and causing said regions to rise up inwardly, and said magnet is interposed between said spaced apart rising pieces and retained by said spaced apart rising pieces.

21. A position sensor system as set forth in Claim 5, wherein the one of said upper rail member and lower rail member has a pair of spaced apart rising pieces formed by causing regions of said predetermined portion thereof to be cut and causing said regions to rise up inwardly, and said magnet is interposed between said spaced apart rising pieces and retained by said spaced apart rising pieces.

22. A position sensor system as set forth in Claim 6, wherein the one of said

upper rail member and lower rail member has a pair of spaced apart rising pieces formed by causing regions of said predetermined portion thereof to be cut and causing said regions to rise up inwardly, and said magnet is interposed between said spaced apart rising pieces and retained by said spaced apart rising pieces.

23. A position sensor system as set forth in Claim 7, wherein the one of said upper rail member and lower rail member has a pair of spaced apart rising pieces formed by causing regions of said predetermined portion thereof to be cut and causing said regions to rise up inwardly, and said magnet is interposed between said spaced apart rising pieces and retained by said spaced apart rising pieces.

24. A position sensor system as set forth in Claim 4, wherein said magnet is housed in and positioned by a case which is mounted to said predetermined portion of the one of said upper rail member and lower rail member.

25. A position sensor system as set forth in Claim 5, wherein said magnet is housed in and positioned by a case which is mounted to said predetermined of the one of said upper rail member and lower rail member.

26. A position sensor system as set forth in Claim 6, wherein said magnet is housed in and positioned by a case which is mounted to said predetermined portion of the one of said upper rail member and lower rail member.

27. A position sensor system as set forth in Claim 7, wherein said magnet is housed in and positioned by a case which is mounted to said predetermined portion of the one of said upper rail member and lower rail member.

28. A position sensor system as set froth in Claim 24, wherein said case comprises a frame-like case.

29. A position sensor system as set froth in Claim 25, wherein said case comprises a frame-like case.

30. A position sensor system as set forth in Claim 26, wherein said case comprises a frame-like case.

31. A position sensor system as set forth in Claim 27, wherein said case comprises a frame-like case.

32. A position sensor system as set forth in Claim 24, wherein said case comprises a body of a substantially quadrangular, truncated pyramid shape in outline.

33. A position sensor system as set forth in Claim 25, wherein said case comprises a body of a substantially quadrangular, truncated pyramid shape in outline.

34. A position sensor system as set forth in Claim 26, wherein said case comprises a body of a substantially quadrangular, truncated pyramid shape in outline.

35. A position sensor system as set forth in Claim 27, wherein said case comprises a body of a substantially quadrangular, truncated pyramid shape in outline.

36. A position sensor system as set forth in Claim 4, wherein said case comprises a base plate, rising portions rising up from front and rear sides of said base plate, slope portions extending from upper ends of said rising portions and obliquely sloping down, mounting pieces extending horizontally from lower ends of said slope portions, and engaging pieces provided at both sides of said base plate so as to rise up from said both sides of said base plate, and wherein said magnet is carried on said base plate and retained by said rising portions and said engaging pieces.

37. A position sensor system as set forth in Claim 5, wherein said case comprises a base plate, rising portions rising up from front and rear sides of said base plate, slope portions extending from upper ends of said rising portions and obliquely sloping down, mounting pieces extending horizontally from lower ends of said slope portions, and engaging pieces provided at both sides of said base plate so as to rise up from said both sides of the base plate, and wherein said magnet is carried on said base

plate and retained by said rising portions and said engaging pieces.

38. A position sensor system as set forth in Claim 6, wherein said case comprises a base plate, rising portions rising up from front and rear sides of said base plate, slope portions extending from upper ends of said rising portions and obliquely sloping down, mounting pieces extending horizontally from lower ends of said slope portions, and engaging pieces provided at both sides of said base plate so as to rise up from said both sides of the base plate, and wherein said magnet is carried on said base plate and retained by said rising portions and said engaging pieces.

39. A position sensor system as set forth in Claim 7, wherein said case comprises a base plate, rising portions rising up from front and rear sides of said base plate, slope portions extending from upper ends of said rising portions and obliquely sloping down, mounting pieces extending horizontally from lower ends of said slope portions, and engaging pieces provided at both sides of said base plate so as to rise up from said both sides of the base plate, and wherein said magnet is carried on said base plate and retained by said rising portions and said engaging pieces.

40. A position sensor system as set forth in Claim 4, wherein the other of said upper rail member and lower rail member has an opening formed in said predetermined portion thereof, and said magnetic sensor provided with an armor case having a flange portion, said magnetic sensor being mounted to said predetermined portion of the other of said upper rail member and lower rail member with said armor case being fitted through said opening, and with said flange portion covering said opening.

41. A position sensor system as set forth in Claim 40, wherein said armor case of said magnetic sensor further has a pair of spaced apart spring clips provided at both sides thereof, said magnetic sensor being mounted to said predetermined portion of the other of said upper rail member and lower rail member with said armor case being

inserted through said opening, with said spring clips being engaged with an edge of said opening, and with said flange portion being pressed against the other of said upper rail member and lower rail member due to actions of said spring clips.

42. A position sensor system as set forth in Claim 40, wherein said flange portion is provided with an applying piece protruding laterally from said flange portion, said magnetic sensor being mounted to said predetermined portion of the other of said upper rail member and lower rail member by causing said applying piece to be secured to said predetermined portion of the other of said upper rail member and lower rail member by means of a tapping screw.

43. A position sensor system as set forth in Claim 2, wherein said position sensor system further includes cleaner means for cleaning said magnetic actuator and said magnetic field-responding element, said cleaner means being arranged within the other of said upper rail member and lower rail member and provided at a second predetermined portion of the other of said upper rail member and lower rail member so as to be received in said space between said magnetic actuator and said magnetic field-responding element as said seat is moved.

44. A position sensor system as set forth in Claim 43, wherein said cleaner means comprises a body and cleaner piles provided on said body.

45. A position sensor system as set forth in Claim 2, wherein said position sensor system further includes cleaner means for cleaning said magnetic actuator and said magnetic field-responding element, said cleaner means comprising cleaner piles provided on said magnetic shielding plate.

46. A position sensor system as set forth in Claim 4, wherein said position sensor system further includes cleaner means for cleaning said magnet, said cleaner means being arranged within the other of said upper rail member and lower rail member



and mounted to a second predetermined portion of the other of said upper rail member and lower rail member.

47. A position sensor system as set forth in Claim 46, wherein said cleaner means comprises a body mounted to said second predetermined portion of said upper rail member and lower rail member, and cleaner piles provided on said body.

48. A position sensor system as set forth in Claim 1, wherein said position sensor system comprises a magnet arranged within a lower rail member of one of the pair of the slide rail means and mounted to a predetermined portion of said lower rail member, and a magnetic sensor arranged within an upper rail member of the one of the pair of said slide rail means and mounted to a predetermined portion of said upper rail member, and said slidable vehicle seat further includes driving means for automatically moving said slidable vehicle seat along said lower rail members, said driving means being arranged within each of the pair of said slide rail means.

49. A position sensor system as set forth in Claim 48, wherein said driving means comprises a lead screw extending along the longitudinal direction of a corresponding lower rail member, said lead screw being supported at both ends thereof to bracket plates secured on said corresponding lower rail member, gear means meshed with said lead screw so as to be movable relative to said lead screw, and a gear box housing said gear means and mounted to an inner surface of a corresponding upper rail member, and said position sensor system further includes a holder mounted on one of bracket plates secured on said lower rail member of the one of the pair of said slide rail means, said magnet being held by said holder.

50. A position sensor system as set forth in Claim 49, wherein the one of said bracket plates comprises a body of substantially L-shape having a vertical section and a horizontal section, said horizontal section being secured on said corresponding lower rail

member and provided with an engaging piece, said holder being formed with a slit, said engaging piece being engaged with said slit.

51. A slidable vehicle seat comprising:

a pair of substantially parallel slide rail means including upper rail members and lower rail members mounted to a floor of a vehicle;

said upper rail members being attached to lower portions of said vehicle seat and supported to said lower rail members so as to be movable along said lower rail members, so that said vehicle seat can be moved along said lower rail members;

said upper rail members and said lower rail members being combined with each other, to thereby define inner spaces therein; and

a position sensor system for sensing seat position in zones and facilitating controlling of the operation of a vehicle passenger restraint device according to a position of said vehicle seat relative to said vehicle passenger restraint device;

said position sensor system being mounted within at least one of said inner spaces.

52. A slidable vehicle seat as set forth in Claim 51, wherein said position sensor system comprises a sensor unit arranged within one of an upper rail member and lower rail member of one of the pair of said slide rail means and mounted to a predetermined portion of the one of said upper rail member and lower rail member, and a magnetic shielding plate arranged within the other of said upper rail member and lower rail member and mounted to a predetermined portion of the other of said upper rail member and lower rail member, said sensor unit including a magnetic actuator and an element which is responsive to a magnetic field created by said magnetic actuator, said magnetic actuator and said magnetic field-responding element being spaced apart and opposed to each other, and wherein a space between said magnetic actuator and said magnetic field-

responding element receives said magnetic shielding plate therein as said vehicle seat is moved along said lower rail members, whereby the passage of a magnetic flux generated by said magnetic actuator is blocked by said magnetic shielding plate.

53. A slidable vehicle seat as set forth in Claim 51, wherein said position sensor system comprises a proximity sensor arranged within one of an upper rail member and lower rail member of one of the pair of said slide rail means and mounted to a predetermined portion of the one of said upper rail member and lower rail member, and metallic and nonmetallic portions being sensed by said proximity sensor, said metallic portion and said nonmetallic portion being provided at a first predetermined portion of the other of said upper rail member and lower rail member and a second predetermined portion of the other of said upper rail member and lower rail member, respectively.

54. A slidable vehicle seat as set forth in Claim 51, wherein said position sensor system comprises a magnet arranged within one of said upper rail member and lower rail member and mounted to a predetermined portion of the one of said upper rail member and lower rail member, and a magnetic sensor arranged within the other of said upper rail member and lower rail member and mounted to a predetermined portion of the other of said upper rail member and lower rail member so as to be opposed to said magnet.

55. A slidable vehicle seat as set forth in Claim 54, wherein said magnet comprises a strip-like magnet, said strip-like magnet having chamfered upper edge portions extending along a longitudinal direction thereof and sloping downward.

56. A slidable vehicle seat as set forth in Claim 54, wherein said magnet is mounted to said predetermined portion of the one of said upper rail member and lower rail member through an iron plate serving as a yoke.

57. A slidable vehicle seat as set forth in Claim 55, wherein said magnet is

mounted to said predetermined portion of the one of said upper rail member and lower rail member through an iron plate serving as a yoke.

58. A slidable vehicle seat as set forth in Claim 54, wherein the one of said upper rail member and lower rail member has a frame portion provided at said predetermined portion thereof, and said magnet is received in and supported by said frame portion.

59. A slidable vehicle seat as set forth in Claim 55, wherein the one of said upper rail member and lower rail member has a frame portion provided at said predetermined portion thereof, and said magnet is received in and supported by said frame portion.

60. A slidable vehicle seat as set forth in Claim 56, wherein the one of said upper rail member and lower rail member has a frame portion provided at said predetermined portion thereof, and said magnet is received in and supported by said frame portion.

61. A slidable vehicle seat as set forth in Claim 57, wherein the one of said upper rail member and lower rail member has a frame portion provided at said predetermined portion thereof, and said magnet is received in and supported by said frame portion.

62. A slidable vehicle seat as set forth in Claim 58, wherein said frame portion is formed by causing said predetermined portion of the one of said upper rail member and lower rail member to be protruded inwardly.

63. A slidable vehicle seat as set forth in Claim 59, wherein said frame portion is formed by causing said predetermined portion of the one of said upper rail member and lower rail member to be protruded inwardly.

64. A slidable vehicle seat as set forth in Claim 60, wherein said frame portion

is formed by causing said predetermined portion of the one of said upper rail member and lower rail member to be protruded inwardly.

65. A slidable vehicle seat as set forth in Claim 61, wherein said frame portion is formed by causing said predetermined portion of the one of said upper rail member and lower rail member to be protruded inwardly.

66. A slidable vehicle seat as set forth in Claim 54, wherein the one of said upper rail member and lower rail member has a recess portion provided at said predetermined portion thereof, and said magnet is received in said recess portion.

67. A slidable vehicle seat as set forth in Claim 55, wherein the one of said upper rail member and lower rail member has a recess portion provided at said predetermined portion thereof, and said magnet is received in said recess portion.

68. A slidable vehicle seat as set forth in Claim 56, wherein the one of said upper rail member and lower rail member has a recess portion provided at said predetermined portion thereof, and said magnet is received in said recess portion.

69. A slidable vehicle seat as set forth in Claim 57, wherein the one of said upper rail member and lower rail member has a recess portion provided at said predetermined portion thereof, and said magnet is received in said recess portion.

70. A slidable vehicle seat as set forth in Claim 54, wherein the one of said upper rail member and lower rail member has a pair of spaced apart rising pieces formed by causing regions of said predetermined portion thereof to be cut and causing said regions to rise up inwardly, and said magnet is interposed between said spaced apart rising pieces and retained by said spaced apart rising pieces.

71. A slidable vehicle seat as set forth in Claim 55, wherein the one of said upper rail member and lower rail member has a pair of spaced apart rising pieces formed by causing regions of said predetermined portion thereof to be cut and causing said

regions to rise up inwardly, and said magnet is interposed between said spaced apart rising pieces and retained by said spaced apart rising pieces.

72. A slidable vehicle seat as set forth in Claim 56, wherein the one of said upper rail member and lower rail member has a pair of spaced apart rising pieces formed by causing regions of said predetermined portion thereof to be cut and causing said regions to rise up inwardly, and said magnet is interposed between said spaced apart rising pieces and retained by said spaced apart rising pieces.

73. A slidable vehicle seat as set forth in Claim 57, wherein the one of said upper rail member and lower rail member has a pair of spaced apart rising pieces formed by causing regions of said predetermined portion thereof to be cut and causing said regions to rise up inwardly, and said magnet is interposed between said spaced apart rising pieces and retained by said spaced apart rising pieces.

74. A slidable vehicle seat as set forth in Claim 54, wherein said magnet is housed in and positioned by a case which is mounted to said predetermined portion of the one of said upper rail member and lower rail member.

75. A slidable vehicle seat as set forth in Claim 55, wherein said magnet is housed in and positioned by a case which is mounted to said predetermined of the one of said upper rail member and lower rail member.

76. A slidable vehicle seat as set forth in Claim 56, wherein said magnet is housed in and positioned by a case which is mounted to said predetermined portion of the one of said upper rail member and lower rail member.

77. A slidable vehicle seat as set forth in Claim 57, wherein said magnet is housed in and positioned by a case which is mounted to said predetermined portion of the one of said upper rail member and lower rail member.

78. A slidable vehicle seat as set froth in Claim 74, wherein said case comprises

a frame-like case.

79. A slidable vehicle seat as set forth in Claim 75, wherein said case comprises a frame-like case.

80. A slidable vehicle seat as set forth in Claim 76, wherein said case comprises a frame-like case.

81. A slidable vehicle seat as set forth in Claim 77, wherein said case comprises a frame-like case.

82. A slidable vehicle seat as set forth in Claim 74, wherein said case comprises a body of a substantially quadrangular, truncated pyramid shape in outline.

83. A slidable vehicle seat as set forth in Claim 75, wherein said case comprises a body of a substantially quadrangular, truncated pyramid shape in outline.

84. A slidable vehicle seat as set forth in Claim 76, wherein said case comprises a body of a substantially quadrangular, truncated pyramid shape in outline.

85. A slidable vehicle seat as set forth in Claim 77, wherein said case comprises a body of a substantially quadrangular, truncated pyramid shape in outline.

86. A slidable vehicle seat as set forth in Claim 74, wherein said case comprises a base plate, rising portions rising up from front and rear sides of said base plate, slope portions extending from upper ends of said rising portions and obliquely sloping down, mounting pieces extending horizontally from lower ends of said slope portions, and engaging pieces provided at both sides of said base plate so as to rise up from said both sides of said base plate, and wherein said magnet is carried on said base plate and retained by said rising portions and said engaging pieces.

87. A slidable vehicle seat as set forth in Claim 75, wherein said case comprises a base plate, rising portions rising up from front and rear sides of said base plate, slope portions extending from upper ends of said rising portions and obliquely sloping down,

mounting pieces extending horizontally from lower ends of said slope portions, and engaging pieces provided at both sides of said base plate so as to rise up from said both sides of the base plate, and wherein said magnet is carried on said base plate and retained by said rising portions and said engaging pieces.

88. A slidable vehicle seat as set forth in Claim 76, wherein said case comprises a base plate, rising portions rising up from front and rear sides of said base plate, slope portions extending from upper ends of said rising portions and obliquely sloping down, mounting pieces extending horizontally from lower ends of said slope portions, and engaging pieces provided at both sides of said base plate so as to rise up from said both sides of the base plate, and wherein said magnet is carried on said base plate and retained by said rising portions and said engaging pieces.

89. A slidable vehicle seat as set forth in Claim 77, wherein said case comprises a base plate, rising portions rising up from front and rear sides of said base plate, slope portions extending from upper ends of said rising portions and obliquely sloping down, mounting pieces extending horizontally from lower ends of said slope portions, and engaging pieces provided at both sides of said base plate so as to rise up from said both sides of the base plate, and wherein said magnet is carried on said base plate and retained by said rising portions and said engaging pieces.

90. A slidable vehicle seat as set forth in Claim 54, wherein the other of said upper rail member and lower rail member has an opening formed in said predetermined portion thereof, and said magnetic sensor provided with an armor case having a flange portion, said magnetic sensor being mounted to said predetermined portion of the other of said upper rail member and lower rail member with said armor case being fitted through said opening, and with said flange portion covering said opening.

91. A slidable vehicle seat as set forth in Claim 90, wherein said armor case of



said magnetic sensor further has a pair of spaced apart spring clips provided at both sides thereof, said magnetic sensor being mounted to said predetermined portion of the other of said upper rail member and lower rail member with said armor case being inserted through said opening, with said spring clips being engaged with an edge of said opening, and with said flange portion being pressed against the other of said upper rail member and lower rail member due to actions of said spring clips.

92. A slidable vehicle seat as set forth in Claim 90, wherein said flange portion is provided with an applying piece protruding laterally from said flange portion, said magnetic sensor being mounted to said predetermined portion of the other of said upper rail member and lower rail member by causing said applying piece to be secured to said predetermined portion of the other of said upper rail member and lower rail member by means of a tapping screw.

93. A slidable vehicle seat as set forth in Claim 52, wherein said position sensor system further includes cleaner means for cleaning said magnetic actuator and said magnetic field-responding element, said cleaner means being arranged within the other of said upper rail member and lower rail member and provided at second predetermined portion of the other of said upper rail member and lower rail member so as to be received in said space between said magnetic actuator and said magnetic field-responding element as said seat is moved.

94. A slidable vehicle seat as set forth in Claim 93, wherein said cleaner means comprises a body and cleaner piles provided on said body.

95. A slidable vehicle seat as set forth in Claim 52, wherein said position sensor system further includes cleaner means for cleaning said magnetic actuator and said magnetic field-responding element, said cleaner means comprising cleaner piles provided on said magnetic shielding plate.

96. A slidable vehicle seat as set forth in Claim 52, wherein said position sensor system further includes cleaner means for cleaning said magnet, said cleaner means being arranged within the other of said upper rail member and lower rail member and mounted to a second predetermined portion of the other of said upper rail member and lower rail member.

97. A slidable vehicle seat as set forth in Claim 96, wherein said cleaner means comprises a body mounted to said second predetermined portion of said upper rail member and lower rail member, and cleaner piles provided on said body.

98. A slidable vehicle seat as set forth in Claim 51, wherein said position sensor system comprises a magnet arranged within a lower rail member of one of the pair of said slide rail means and mounted to a predetermined portion of said lower rail member, and a magnetic sensor arranged within an upper rail member of the one of the pair of said rail means and mounted to a predetermined portion of said upper rail member, and said slidable vehicle seat further includes driving means for automatically moving said slidable vehicle seat along said lower rail members, said driving means being arranged within each of the pair of said slide rail means.

99. A slidable vehicle seat as set forth in Claim 98, wherein said driving means comprises a lead screw extending along the longitudinal direction of a corresponding lower rail member, said lead screw being supported at both ends thereof to bracket plates secured on said corresponding lower rail member, gear means meshed with said lead screw so as to be movable relative to said lead screw, and a gear box housing said gear means and mounted to an inner surface of a corresponding upper rail member, and said position sensor system further includes a holder mounted on one of bracket plates secured on said lower rail member of the one of the pair of said slide rail means, said magnet being held by said holder.

100. A slidable vehicle seat as set forth in Claim 99, wherein the one of said bracket plates comprises a body of substantially L-shape having a vertical section and a horizontal section, said horizontal section being secured on said corresponding lower rail member and provided with an engaging piece, said holder being formed with a slit, said engaging piece being engaged with said slit.